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| 10/541,330 | 07/01/2005 | Toshimasa Sagawa | 121036-0086 | 1091 |
| 35684 | 7590 | 10/09/2007 | | |
| BUTZEL LONG 350 SOUTH MAIN STREET SUITE 300 ANN ARBOR, MI 48104 | | | EXAMINER CHEUNG, WILLIAM K | |
| | | | ART UNIT 1796 | PAPER NUMBER |
| | | | NOTIFICATION DATE 10/09/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/541,330

Applicant(s)

SAGAWA ET AL.

Examiner

William K. Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/10/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-10 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The request filed on July 30, 2007 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 10/541,330 is acceptable and a RCE has been established. An action on the RCE follows.
2. In view of the amendment filed June 28, 2007 and September 10, 2007, claim 7 has been cancelled. Claims 1-6, 8-10, 15 are pending. Further, the rejection of claims 2-10, 15 are rejected under 35 U.S.C. 112, second paragraph, is withdrawn.
3. In view of the amendment filed June 28, 2007 and September 10, 2007, the rejection of Claim 7 under 35 U.S.C. 103(a) as being unpatentable over Saito (US 6,387,292) in view of Fitzgerald (US 6,180,740) is withdrawn. Further, the rejection of Claims 1-6, 8-10, 15 under 35 U.S.C. 103(a) as being unpatentable over Saito (US 6,387,292), is withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 1-6, 8-10, 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 (line 4), the recitation "nonionic surfactant comprising a condensation product of polyethylene oxide (n=10-90) and octyl phenol or nonyl pheno" is not described in the original specification. Therefore, it is considered "new matter". Although applicants argue that the newly recited feature is supported by a document "WO 2004/067579 A1", applicants must recognize that because the submitted specification fails to incorporate "WO 2004/067579 A1" into the specification of the present application. Therefore, the instant new matter rejection is proper. Further, regarding the priority document filed, applicants are required to file an English translation of the priority document in order to gain the full benefit of the priority date filed.

Regarding the instant "new matter" related rejection, applicants are required to submit an amendment to have the "new matter" removed.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-6, 8-10, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (US 6,387,292) in view of Hara et al. (US 2003/0114547 A1).

The invention of claims 1-6, 8-10, 15 relates to a process for preparing an aqueous dispersion which comprises subjecting (meth)acrylate containing a polyfluoroalkyl group and a polymerizable monomer free of fluorine atoms to an emulsification treatment in the presence of water, a nonionic surfactant comprising a condensation product of polyethylene oxide (n=10-90) and octyl phenol or nonyl phenol and a cationic surfactant, and a polypropyleneglycol-based compound

*having a molecular weight of **250 to 5,000**, followed by copolymerization reaction in the presence of a **polymerization initiator**.*

Saito (col. 3, line 57; abstract) discloses a process of preparing an anti-soil composition in the form of an aqueous dispersion comprising a fluoroalkyl group-containing monomer with a polymerizable monomer free of fluorine atoms, and polypropylene glycol having an average molecular weight of not more than 1,000. Saito (col. 2, line 12-13) disclose a C₁₂-fluoroalkyl group containing monomer. Saito (col. 3, line 10-20) disclose a list of polymerizable monomers that include cyclohexyl (meth)acrylate, benzyl (meth)acrylate, stearyl (meth)acrylate, acrylamide. The disclosed stearyl (meth)acrylate of Saito (col. 3, line 10-20) generically includes stearyl acrylate in view of claim 2 of Saito, where a (meth)acrylate ester also includes an acrylate ester. Saito clearly indicate using a polymerization initiator (col. 4, line 67), and surfactants (col. 5, line 65 to col. 6, line 7). Saito (col. 4, example 1) disclose a formulation comprising at least 10 wt% of polyfluoroalkyl groups. Saito et al. (col. 6, line 8-12) describe the process of preparing an aqueous dispersion comprising water.

Regarding the claimed non-ionic surfactant, Saito (col. 5, line 65 to col. 6, line 3) clearly disclose the use of non-ionic surfactants based on polyethylene glycol and octyl or nonyl phenol.

Just as argued, the difference between the invention of claims 1-6, 8-10, 15 and Saito is that the process of Saito prepares the polymers before the emulsification step with water while the invention of claims 1-6, 8-10, 15 involves adding water first.

However, since Saito discloses all the critical steps as claimed, but in different order, and since the mixing the order of the processing steps would not affect the outcome of obtaining an aqueous dispersion, the examiner has a reasonable basis that the differences in processing steps are considered obvious, *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.), the rearrangement of steps in a disclosed invention is considered obvious.

The difference between the invention of claims 1-6, 8-10, 15 is that Saito is silent on a process comprising the use of cationic surfactants.

Hara et al. (abstract; page 1, 0014 to page 2, 0033) disclose a process for preparing a dispersion of fluorine-containing polymer. Further, Hara et al. (page 2, 0036-0038) clearly teach the combination use of different types of surfactants, which includes cationic surfactants (page 2, 0037) and nonionic surfactants (page 2, 0038) as claimed. Motivated by the expectation of success of preparing a dispersion that the impart water-repellent properties to substrates (abstract), it would have been obvious to

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one of ordinary skill in art to incorporate the combination use of cationic surfactants and non-ionic surfactants as taught in Hara et al. into the Saito to obtain the invention of claims 1-6, 8-10, 15.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William K. Cheung, Ph. D.

Primary Examiner

September 29, 2007

WILLIAM K. CHEUNG
PRIMARY EXAMINER